

6.01.00.00 - ENGINEERING

GENERAL

6.01.01.00 Scope

R/W Engineering is the office survey phase of transportation engineering. R/W Engineering prepares maps and descriptions for acquisition and disposal of right of way and prepares, maintains and updates record maps for R/W and other CALTRANS properties. CALTRANS's system of data processing is designed to isolate costs, and accounts for various operations of R/W Engineering, as well as other R/W activities.

6.01.01.01 Project Engineering

R/W Engineering work for specific projects begins with collection of information necessary for location of property lines. It continues through preparation and delivery of maps, descriptions, and documents to the appraisal, acquisition, condemnation, and vouchering sections. It ends with relinquishment and vacation of superseded highways and collateral facilities, disposal of excess lands, and, in some cases, preparation of monumentation maps. Preparation of monumentation maps is a duty of the Survey function in some Districts.

6.01.01.02 R/W Engineering Drafting and Mapping

Examples of most R/W Engineering maps, with requirements for preparation of these maps, are shown in Exhibit 6-1 with an alphabetical letter identifying each separate map type. The Drafting And Plans Manual, R/W Engineering Drafting And Mapping Chapter also shows examples, requirements and standards.

The purpose of the Exhibit maps and Drafting And Plans Manual is to provide guidance and assistance to employees who are involved in preparing engineering drawings. As such, all maps must be prepared in accordance with the Exhibits and/or Drafting and Plans Manual.

6.01.02.00 Maps for Federal Participation in R/W Costs

FHWA Maps are used to show parcels to be acquired on projects for which Federal aid reimbursement will be requested. They are used for:

- A. Transmittal to the FHWA for approval of right of way requirements.
- B. To support claims for reimbursement.
- C. To assist in vouchering for right of way costs and in maintenance of cost records.

Maps used are Project Sheet/Index Maps (Exhibit 6-1(A)) and Final Voucher Maps.

6.01.02.01 Project Sheet Maps

Design changes subsequent to initial FHWA approval of Project Sheet Maps shall be processed as follows:

- A. Whenever design changes necessitate acquiring parcels in addition to those shown on approved parcel acquisition maps, a revised sheet (or sheets) delineating such parcels will be submitted to the FHWA. These submissions should indicate the reason for the revised sheet.
- B. Whenever there is a major design change of such a magnitude as to require an additional public hearing, revised plans will be submitted to the FHWA for issuance of an amended FHWA authorization.
- C. Minor line changes involving those parcels shown on original approved partial acquisition maps will be incorporated in final voucher "as-built" right of way plans (see Section 6.01.02.03).

6.01.02.02 Total Acquisition Maps

Total acquisition parcels may be acquired and vouchered prior to the time that termini of projects and interchange locations are definite. Total Acquisition Maps may be used in place of project sheet maps at the time of agreement. Total Acquisition Maps will show center lines, approximate right of way lines, parcel numbers and areas as a minimum and should show as much additional detail required for project sheet maps as is available at the time of submittal.

When partial FHWA authorization is obtained it should be revised to full FHWA authorization as soon as design details become available. Total Acquisition Maps should be replaced with project sheet maps and a supplemental agreement executed as soon thereafter as possible.

6.01.02.03 Final Voucher Maps

At completion of the construction project Project Sheet Maps are updated. R/W Engineers must check for right of way, parcel and area changes by comparing with the latest R/W Map. Although excess areas must be shown, there is no need to include Director's Deeds and Relinquishments. They also check for construction changes affecting right of way lines by comparing with "As-Built's".

Once all changes have been incorporated, maps are ready to be submitted for final vouchering.

6.01.03.00 Cost Estimate Maps

Adequate lead time and quality of mapping submitted to R/W are critical factors in producing valid R/W cost estimates. These maps must show the approximate land requirements for a project in advance of precise design requirements. They are used for:

- A. Studying alternative route locations.
- B. Studying alternative design features.
- C. Producing cost estimates comprising of:
 - 1. Land (ownership and area)
 - 2. Improvements
 - 3. Severance Damages
 - 4. Special Benefits
 - 5. Demolition

6. Relocation Assistance

7. Utility Relocation

The Divisions of Project Development and R/W determined it is Project Development's responsibility to obtain aerial mapping, mosaics, or as-built plans for all major projects, and for minor projects if available, covering affected properties and showing all improvements. For urban areas a scale of 1" = 50' (preferred) or 1" = 100' will be used. For rural areas a scale of 1" = 100' (preferred) or 1" = 200' will be used. Existing mapping or as-built plans may be used for minor projects or rehabilitation and operational improvement type projects, but should be field reviewed by Project Development to determine if affected property improvements are accurately shown.

A reproducible base map shall be sent to R/W. A copy of the base map showing the approximate proposed right of way lines must also be attached.

R/W Engineering will use current assessor's maps to graphically scale affected ownerships on reproducible base maps, showing limits and size of parcels and assessor's parcel numbers. R/W Engineering will also provide the location of existing right of way lines and existing access control line information.

R/W will return a reproducible ownership base map to Project Development.

Project Development, when requesting R/W cost estimates will plot on returned ownership base maps proposed right of way requirements along with any proposed access control. For conventional highways, significant grade changes requiring revisions to driveways should be indicated because changes to property ingress can have an impact on property value.

A reproducible ownership base map delineating right of way requirements should be returned to R/W. The maps will be reviewed by R/W Engineering and revised if necessary. Areas for rights of way, excess and remainders will be calculated and a print will be processed for estimating purposes.

It will be Project Development's responsibility to frequently review the project's right of way requirements to determine if substantive design changes have modified those requirements. Revised maps should be prepared and resubmitted to R/W as required.

6.01.04.00 Freeway Lease Area Airspace Maps

FLA Airspace Maps are used to show State-owned property, adjacent to or under freeways, that are available for leasing. They are used for inventory purposes, for information to potential lessees, for circulation prior to leasing and for estimating or appraising airspace lease areas. They consist of an Index Map and a Parcel Map. Parcel Maps consist of either an Inventory Map or an Appraisal Map.

All FLA maps shall be assigned FLA numbers as for example:

Sites identified along a route would be assigned an FLA prefix followed by the highway route number and number of the particular site, i.e., sites along Route 5 will be designated FLA-5-1, FLA-5-2, etc. Sites along Route 101 will be designated FLA-101-1, FLA-101-2, etc.

Requirements for FLA Parcel Maps are shown in Exhibits 6-1(B).

6.01.05.00 Hardship Authorization Maps

Hardship Maps are prepared to show parcels for acquisition in advance of normal acquisition scheduling. The maps are used for:

- A. Appraisal of the property.
- B. Negotiations with the property owner.
- C. As a base for a Resolution Of Necessity Map, if necessary.
- D. A temporary R/W Record Map.

Requirements for Hardship Maps are shown in Exhibit 6-1(C).

6.01.05.01 Protection Authorization Maps

Protection Maps are prepared to show parcels proposed for advance acquisition to prevent development of the parcel. The maps are used for submittal to the CTC when requesting approval to appraise and acquire. They are also used for the same reasons as hardship maps.

Requirements for Protection Maps are shown in Exhibit 6-1(D).

6.01.06.00 Witness in Condemnation

Those persons assigned to R/W Engineering who may be called upon to testify in court proceedings shall obtain training for those occasions. When appearing as a witness, they shall act as a representative of the public by being frank and truthful, giving honest, sincere, and competent answers, speaking distinctly and loud enough to be heard, keeping in mind that a record is being made. In the use of exhibits or blackboard explanation, they should refer to station points so the record will have meaning. They should at all times be courteous and respectful to the court.

R/W Engineers shall also assist the Legal Division and witnesses on all matters related to R/W Engineering.